SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1954

No. 11, Original

STATE OF MISSISSIPPI,

Plaintiff,

versus

STATE OF LOUISIANA,

Defendant

BRIEF ON BEHALF OF THE STATE OF MISSISSIPPI IN SUPPORT OF THE SPECIAL MASTER'S REPORT AND RESPONDING TO EXCEPTIONS THERETO OF THE STATE OF LOUISIANA.

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BRIEF ON BEHALF OF THE STATE OF MISSISSIPPI IN SUPPORT OF THE SPECIAL MASTER'S REPORT AND RESPONDING TO EXCEPTIONS THERETO OF THE STATE OF LOUISIANA.

To the Honorable Supreme Court of the United States of America:

Jurisdiction

This is an original action brought by the State of Mississippi against the State of Louisiana for the purpose of having this Court determine and fix the boundary between the two states in an area about fifteen miles in length on the Mississippi River described in Paragraph (8) of the Bill of Complaint. This area is about sixteen miles below Vicksburg in Warren County, Mississippi. Jurisdiction of this Court is conferred by Article III, Section 2, of the Constitution and by Section 1251, Title 28, U.S.C.A. Jurisdiction is not in issue.

The Reference to the Special Master

This Court by its Order of October 26, 1933, 346 U.S. 862; referred this cause to D. K. McKamy, Esquire, of Birmingham, Alabama as Special Master, with authority to take such evidence as might be introduced and such as he might deem necessary to call for; and directed the Master to find the facts specially and state separately his conclusions of law thereon, and submit the same to this Court with his recommendations for a Decree. The Master has so done.

Mississippi has filed no exceptions to the findings of fact, conclusions of law or recommended decree as submitted by the Special Master.

Louisiana has filed exceptions to some of the findings of fact of the Special Master. Louisiana makes no exception to any of the conclusions of law as stated by the Special Master, but claims the Master disregarded such conclusions of law in two instances.

Procedural Rules on Exceptions in Case of Original Jurisdiction

Under the rules of procedure applicable to exceptions to a master's report in cases of original jurisdiction, the master's report should be accepted unless clearly erroneous.

> "The form of pleadings and motions in original actions shall be governed, so far as may be, by the Federal Rules of Civil Procedure, 28 U.S.C.A., and in other respects those rules, where their application is appropriate, may be taken as a guide to procedure in original actions in this court."

Supreme Court Rules, Part III. Original Jurisdiction. Rule 9(2).

"In an action to be trial without a jury the court shall accept the master's findings of fact unless clearly erroneous."

Rules of Civil Procedure, Rule 53(e)(2).

The principles embodied in these rules have been recognized, followed and enforced by this Court in cases prior to and since the adoption of the rules.

Girard L. Ins. & T. Co. v. *Cooper,* 162 U. S. 529, 16 S. Ct. 879, 40 L. Ed. 1062;
Camden v. *Stuart,* 144 U. S. 104, 12 S. Ct. 585, 36 L. Ed. 363;
Medsker v. *Bonebrake,* 108 U. S. 66, 2 S. Ct. 351, 27 L. Ed. 654;
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Arkansas v. *Tennessee,* 310 U. S. 563, 60 S. Ct. 1026, 84 L. Ed. 1362;
Kansas v. *Missouri,* 322 U. S. 213, 64 S. Ct. 975, 88 L. Ed. 1234.

Diamond Point and Diamond Island Towhead Admitted by Louisiana to be in Mississippi

The pleadings of Louisiana claimed all of Diamond Point and Diamond Island Towhead. However, prior to the hearing before the Master, Louisiana admitted these areas were

in the State of Mississippi in two separate stipulations viz.:

"It is admitted by the State of Louisiana that subsequent to the entry of the States of Louisiana and Mississippi into the Union, a point bar developed from the Mississippi shore, moved in a North and Westerly direction from its original position, forming a point bar. That subsequently a portion, or the tip, of that point bar was cut off and now the remnant of the portion, or tip, remains on the western side of the present channel of the Mississippi River, and that portion, or piece, of land on the western side in the vicinity of what is known as Diamond Island Towhead is a part of the State of Mississippi." (Tr. 5, 6.)

"Pursuant to authority of letter from Hon. Fred S. LeBlanc, Attorney General of the State of Louisiana dated July 2, 1954, a copy of which is annexed hereto the State of Louisiana, by E. H. Lancaster and Ashton L. Stewart, Special Assistant Attorneys General admits the area known as Diamond Point is not located within the State of Louisiana and Louisiana does not deny that this area is located in the State of Mississippi." (Tr. 8.)

The Questions Presented for Review

1. Are the special findings of fact as reported by the Special Master to which Louisiana has taken exception supported by competent and credible evidence?

2. Has the Special Master correctly applied his conclusions of law to the facts?

3. Is the recommended decree in accordance with the facts and the law of this case?

Summary of Argument

1. The Special Master has stated the law of this case correctly and has applied correctly his conclusions of law to the facts.

2. The special findings of fact as reported by the Special Master, including those to which Louisiana has taken exception, are supported by competent and credible evidence and are in accordance with the long line of decisions of this Court in like cases.

3. In taking exceptions to the findings of fact and conclusions of law as stated in the report of the Special Master, Louisiana ignores the "rule of the thalweg" and misconceives the meaning of the language of this Court as employed in other like cases.

4. Louisiana refuses to follow the "Thalweg Doctrine" as announced by this Court as the basis for establishing the boundary between the states.

5. Louisiana seeks in this case to substitute its own definition of the term "thalweg" for the legal definition of the term adopted by this Court. Louisiana's definition of the term is one wholly unrelated to navigation in any way.

6. Louisiana ignores the applicable rules of law, formerly announced by this Court, in locating and determining the boundary between the states.

7. Louisiana predicates its exceptions to the Master's report on a false premise.

8. The recommended decree contained in the report of the Special Master is in accord with the law and the evidence in this case.

Argument

The Applicable Law of This Case

For a proper consideration of this cause, the law as stated in the Master's report, which is not disputed nor excepted

to by Louisiana or by Mississippi, is here restated for the convenience of the Court:

1. When a *navigable* river forms the boundary separating one state from another, in the absence of a special convention between the states, or long use equivalent thereto, the thalweg or middle of the main *navigable* channel is to be taken as the true boundary line.

Iowa v. *Illinois*, 147 U.S. 1, 13 S. Ct. 239, 37 L. Ed. 55;
Arkansas v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638;
Louisiana v. *Mississippi*, 202 U.S. 1, 26 S. Ct. 408, 50 L. Ed. 913;
New Jersey v. *Delaware*, 291 U.S. 361, 54 S. Ct. 407, 78 L. Ed. 847.

2. The thalweg is defined as meaning the middle of the main *navigable* channel, *the track taken by boats in their course down the stream*, which is that of the strongest current.

New Jersey v. *Delaware*, 291 U.S. 361, 54 S. Ct. 407, 78 L. Ed. 847;
Iowa v. *Illinois*, 147 U.S. 1, 13 S. Ct. 239, 37 L. Ed. 55;
Louisiana v. *Mississippi*, 202 U.S. 1, 26 S. Ct. 408, 50 L. Ed. 913;
Arkansas v. *Mississippi*, 250 U.S. 39, 39 S. Ct. 422, 63 L. Ed. 832;
Arkansas v. *Tennessee*, 269 U.S. 152, 46 S. Ct. 31, 70 L. Ed. 206.

3. Where the course of the boundary stream changes through the operation of the natural and gradual proc-

ess of erosion and accretion, the boundary follows the stream and remains the varying center of the channel.

New Orleans v. *United States*, 10 Peters 662;
Nebraska v. *Iowa*, 143 U.S. 359, 12 S. Ct. 396, 36 L. Ed. 186;
Missouri v. *Nebraska*, 196 U.S. 23, 25 S. Ct. 155, 49 L. Ed. 372;
Arkansas v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638.

4. When, however, from any cause, natural or artificial, a boundary river suddenly leaves its old channel and seeks a new bed, this sudden and rapid change is termed an avulsion and the resulting change works no change of boundary, which remains in the middle of the old channel, although no water may be flowing in it, and *irrespective of subsequent changes in the new channel*.

New Orleans v. *United States*, 10 Peters 662;
Jefferis v. *East Omaha Land Co.*, 134 U.S. 178;
Nebraska v. *Iowa*, 143 U.S. 359, 12 S. Ct. 396, 36 L. Ed. 186;
Missouri v. *Nebraska*, 196 U.S. 23, 25 S. Ct. 155, 49 L. Ed. 372;
Arkansas v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638;
Louisiana v. *Mississippi*, 282 U.S. 458, 51 S. Ct. 197, 75 L. Ed. 459.

5. In case of an avulsion, so long as the old channel remains a running stream, the boundary marked by it is still subject to be changed by erosion and accretion; but when the water becomes stagnant, the effect of

these processes is at an end; the boundary then becomes fixed in the middle of the channel (as defined by the Supreme Court) *and the gradual filling up of the bed that ensues is not to be treated as an accretion to the shores but as an ultimate effect of the avulsion.* The emergence of the land, however, may or may not follow, and *it ought not in reason to have any controlling effect upon the location of the boundary* line in the old channel.

Arkansas v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638.

6. The principle of prescription and acquiescence in determining the boundary between states has been sustained and has received repeated recognition by the Supreme Court.

Arkansas v. *Tennessee*, 310 U.S. 563, 60 S. Ct. 1026, 84 L. Ed. 1362;

Rhode Island v. *Massachusetts*, 4 Howard 591, 11 L. Ed. 1116;

Louisiana v. *Mississippi*, 202 U.S. 1, 26 S. Ct. 408, 50 L. Ed. 913;

Virginia v. *Tennessee*, 148 U.S. 503, 13 S. Ct. 728, 37 L. Ed. 537;

Maryland v. *West Virginia*, 217 U.S. 1, 30 S. Ct. 268, 54 L. Ed. 645;

Vermont v. *New Hampshire*, 289 U.S. 593, 53 S. Ct. 708, 77 L. Ed. 1392;

Michigan v. *Wisconsin*, 270 U.S. 295, 46 S. Ct. 290, 70 L. Ed. 595.

7. Where an island is formed in a *navigable* stream which is the boundary between states, the island be-

longs to the state situated on the side of the thalweg on which the island is formed.

Kansas v. *Missouri*, 322 U.S. 213, 64 S. Ct. 975, 88 L. Ed. 1234;

City of St. Louis v. *Rutz*, 138 U.S. 226, 34 L. Ed. 911.

8. If an island grows by the addition of alluvion till it reaches the mainland, such new made land will not become the property of the shore owner, but belongs to the owner of the island.

Arkansas v. *Tennessee*: 310 U.S. 563, 60 S. Ct. 1026, 84 L. Ed. 1362.

9. The degree of proof to fix a boundary between states where a channel of river forming the boundary is abandoned is such certainty as is reasonable as a practical matter, having regard to the circumstances.

Arkansas v. *Tennessee*, 269 U.S. 152, 46 S. Ct. 31, 70 L. Ed. 206.

10. Burden of proof is on the State of Mississippi, as the complainant.

Kansas v. *Missouri*, 322 U.S. 213, 88 L. Ed. 1234, 64 S. Ct. 975.

(Emphasis supplied.)

Louisiana contends that the Master has disregarded his stated Conclusions of Law Numbers 3 and 5. It will readily be perceived that what Louisiana means is that it does not agree with the interpretation placed by the Master upon his Conclusions Numbers 3 and 5, and does not agree with the Master's application of the law to the special findings

of fact in this case. The error is that of Louisiana and not of the Master, brought about by Louisiana's refusal to apply the rule of thalweg as announced by this Court; its apparent lack of understanding of that rule; and the insistence of Louisiana upon its newly conceived theory of "effective flow" at high water as effecting a change in the boundary between the states after such boundary has become fixed in the thalweg of the old channel of the river as a result of the occurrence of an avulsion.

The fallacy of the argument here advanced by Louisiana, as same was urged throughout the entire hearing in this cause before the Master, is succinctly stated by the Master in his report (p. 9) in commenting upon the quotation from the opinion of this Court in the case of *Arkansas* v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638, viz.:

> "Attorneys for the State of Louisiana contend that under this decision the boundary does not become fixed after an avulsion until there is no 'effective flow' in the old channel. By 'effective flow' they mean that if, at any stage of the river from extreme low to high flood, any water flows in the old channel in sufficient amount and force to cause erosion or accretions in the old channel, then the boundary has not become fixed. Under this contention, the boundary is still subject to change in the old channel during the periods of extreme flood if any erosion is caused in that channel or any accretions are added."

The falsity of the premise upon which the entire argument of Louisiana is predicated in this case results from its refusal to relate the term "thalweg" to navigation in any respect whatsoever. This is demonstrated throughout the

record in this cause not only by the arguments of counsel for the State of Louisiana but by the testimony of the witnesses for that state.

The Thalweg Doctrine

The changes in the courses of the Mississippi River which brought about this litigation between the States of Mississippi and Louisiana were changes caused by avulsions, one natural and the other artificial. When, from either cause, natural on the first occasion and artificial on the other, the river left its old main channel and sought a new one, this sudden and rapid change, termed an avulsion, resulted in no change of boundary, which remained in the middle of the old navigable channel, although no water may be flowing in it, and irrespective of subsequent changes in the new channel.

The above statement is based upon the rule of the thalweg which has been recognized and applied in the earliest decisions of this Court involving questions of boundaries between the states of the Union bordering on navigable rivers.

Handly's Lessee v. *Anthony, et al.*, 5 Wheaton 374, 5 L. Ed. 113;

Missouri v. *Kentucky*, 11 Wall. 395, 20 L. Ed. 116;

Indiana v. *Kentucky*, 136 U.S. 479, 10 S. Ct. 1051, 34 L. Ed. 329;

St. Louis v. *Rutz*, 138 U.S. 226, 11 S. Ct. 337, 34 Ed. 941;

Nebraska v. *Iowa*, 143 U.S. 359, 12 S. Ct. 396, 36 L. Ed. 186.

Since the case of *Iowa* v. *Illinois*, 147 U.S. 1, 13 S. Ct. 237, 37 L. Ed. 55, the rule of the thalweg has not been open to question, for therein that rule was stated, declared

and settled by the opinion of the Court by Mr. Justice Field, from which we now quote:

> "When a navigable river constituted the boundary between two independent states, the line defining the point at which the jurisdiction of the two separates is well established to be the middle of the main channel of the stream. The interest of each state in the navigation of the river admits of no other line. The preservation by each of its equal right in the navigation of the stream is the subject of paramount interest. It is, therefore, laid down in all the recognized treatises on international law of modern times that the middle of the channel of the stream marks the true boundary between the adjoining states up to which each state will on its side exercise jurisdiction. . . .
>
> " . . .
>
> " . . . We therefore hold, in accordance with this view, that the true line in navigable rivers between the states of the Union which separates the jurisdiction of one from the other is the middle of the main channel of the river. Thus the jurisdiction of each state extends to the thread of the stream, that is, to the 'mid-channel', and, if there be several channels, to the middle of the principal one, or, rather, the one usually followed."

In the case of *Arkansas* v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638, in commenting upon the opinion rendered in the case of *Iowa* v. *Illinois* (supra), this Court, speaking through Mr. Justice Pitney, said:

> "The rule thus adopted, known as the rule of the 'Thalweg' has been treated as set at rest by that decision, *Louisiana* v. *Mississippi*, 202 U.S. 1, 49; *Wash-*

ington v. *Oregon*, 211 U.S. 127, 134; 214 U.S. 205, 215. The argument submitted in behalf of the defendant state in the case at bar, including a reference to the notable recent decision of its supreme court in *State* v. *Muncie Pulp Co.* (1907), 119 Tenn. 47, has failed to convince us that this rule ought now, after the lapse of twenty-five years, to be departed from."

The rule of the thalweg has never been departed from and has been consistently adhered to.

Missouri v. *Nebraska*, 196 U.S. 23, 25 S. Ct. 155, 49 L. Ed. 372;

Louisiana v. *Mississippi*, 202 U.S. 1, 26 S. Ct. 408, 50 L. Ed. 913;

Washington v. *Oregon*, 211 U.S. 127, 53 L. Ed. 118, and on rehearing, 214 U.S. 205, 29 S. Ct. 361, 53 L. Ed. 969;

Arkansas v. *Mississippi*, 250 U.S. 39, 39 S. Ct. 422, 63 L. Ed. 832;

Minnesota v. *Wisconsin*, 252 U.S. 273, 40 S. Ct. 313, 64 L. Ed. 558;

Louisiana v. *Mississippi*, 282 U.S. 458, 51 S. Ct. 197, 75 L. Ed. 459.

A most exhaustive and scholarly discussion of the rule of the thalweg or "thalweg doctrine" is contained in the opinion of this Court rendered by Mr. Justice Cordozo in the case of *New Jersey* v. *Delaware*, 291 U.S. 361, 54 S. Ct. 407, 78 L. Ed. 847.

In further discussing the rule of the thalweg as related to an avulsion, this Court has said:

> "The rule of the thalweg rests upon equitable considerations and is intended to safeguard to each state equality of access and right of navigation in

the stream. (Cases cited). The rule yields to the doctrine that a boundary is unaltered by an avulsion and in such case, in the absence of prescription, the boundary no longer follows the thalweg but remains at the original line although now on dry land because the old channel has filled up. (Cases cited)."

Arkansas v. *Tennessee*, 310 U.S. 563, 571, 60 S. Ct. 1026, 84 L. Ed. 1362, 1367.

Louisiana Admits Ignoring the Thalweg Doctrine Announced by this Court

Louisiana has predicated its case principally upon the testimony of Mr. Clarence O. Durham, an Assistant Professor of Geology at Louisiana State University, and Mr. Frank Welder, a graduate student of Geology at Louisiana State University, taken before the Special Master which reveals with remarkable clarity the fallacy of the premise upon which the erroneous position and theory of Louisiana is based. Mr. Durham and Mr. Welder testified that they were employed by the Attorney General of Louisiana to make a study of the areas involved in this case to determine the geological history of the areas with no purpose of establishing the boundary between the states, and they made no boundary study of the areas; that they were unable to locate and establish the thalweg, or the middle of the main navigable channel of the Mississippi River in the old abandoned channels of the Mississippi River after the natural and artificial avulsions; that their whole development of this matter has been based upon ignoring the term "*thalweg*" as having any relation whatsoever to navigation.

"*By Mr. McKamy:*

"Q. Mr. Durham, will you tell us your definition of *thalweg*.

"A. Thalweg, sir, is the deep portion or zone of a stream. My understanding is that it's derived from the German word *valleyway*, and any stream, therefore, would have a thalweg by that definition.

"Q. You do not refer it in any way to navigation?

"A. No sir.

"*By Mr. Brandon:*

"Q. And so I understand that your whole development of this matter has been based upon ignoring the term *thalweg* as having any relation whatsoever to navigation?

"A. That is right sir. . . ."

(Transcript, Vol. III, p. 1230.)

"*By Mr. Brandon:*

" . . .

"Q. Mr. Welder, what is your understanding of the term 'Thalweg'?

"A. Having studied a little bit of German, sir, I used the translation 'Valleyway'.

"Q. You do not know its definition then in matters pertaining to navigation or boundaries when it is referred to in reference to the application of the thalweg doctrine?

"A. Sir, I have never done any research toward boundary determination, nor have I ever been affiliated with any navigation on the river, so I am afraid I wouldn't be familiar with the thalweg doctrine.

(Transcript, Vol. III, pp. 1366, 1367)

" . . .

"Q. You did not concern yourself with the location of that thalweg as it existed as of the approximate

date of January, 1933 or shortly thereafter, in attempting to locate anything concerning boundaries or the fixation of the navigable channel prior to the effective making of the cut-off?

"A. Well, sir, on the thalweg, in my mind it is a rather wide and definite zone and I don't feel that it can be pinpointed and so I didn't concern myself too much with it."

(Transcript, Vol. III, pp. 1368, 1369.)

The Effect of an Avulsion

An avulsion "works no change of boundary which remains in the middle of the old channel although no water may be flowing in it, and irrespective of subsequent changes in the new channel".

The New Channel Thenceforth Belongs Wholly to the State Whose Soil It Occupies

It should be borne in mind that upon the occurrence of the avulsion (circa 1864-1866) across Diamond Point Bar, making a chute cut-off across the same and separating the towhead from the remainder of Diamond Point, the new channel in its entirety from the point of division of the thalweg of the river at the time of the avulsion to the point where the waters flowing through the new channel emptied back into the course of the river downstream was wholly within the territory of the State of Mississippi. When the main flow of the river adopted this new channel, the entire breadth of this new channel for its entire length and on either side of the thalweg of the new (chute cut-off) channel was within Mississippi and constituted a part of the territory of the State of Mississippi.

" . . . if, by any natural accident, the water, which separated the two states, enters of a sudden into the

territory of the other, it will thenceforth belong to the State whose soil it occupies, and the land, including the abandoned river-channel or bed, will incur no change of master . . .

" . . . When the river changes its course, throwing itself on one of two conterminous states, it then comes to belong to the State through whose territory it runs, all community of right in it so far ceasing."

Nebraska v. *Iowa*, 143 U.S. 359, 12 S. Ct. 396, 36 L. Ed. 186, 188, 189.

And further:

"The gradual and natural deposition of alluvion by the process of accretion is to be distinguished from avulsion which is the sudden and rapid change of the channel of a stream, and if instead of a gradual and progressive change of its bed, the river by accident merely natural, turns entirely out of its course and runs into one of the two neighboring states, the bed which it has abandoned becomes thenceforth their boundary, and remains the property of the former owner (or owners) of the river, the river itself is, as it were, annihilated in all that part *while it is reproduced in its new bed and there belongs only to the state in which it flows.*'"

Idem. (Emphasis supplied.)

Along What Line in the Old Channel (Abandoned as a Result of an Avulsion) Does the Boundary Between the States Remain Unaffected by the Avulsion?

This Court has repeatedly held that "if the stream from any cause, natural or artificial, suddenly leaves its old bed and forms a new one, by the process known as an avulsion, the resulting change of channel works no change in

the boundary, *which remains in the middle of the old channel*", and has defined the term "middle of the old channel" as being the *thalweg*, or line of navigation of vessels coursing downstream, of the main or navigable channel of the river.

New Orleans v. *United States*, 10 Peters 662, 717, 9 L. Ed. 573, 594;

Jefferis v. *East Omaha Land Co.*, 134 U. S. 178, 189, 33 L. Ed. 872, 876, 10 S. Ct. 518;

Nebraska v. *Iowa*, 143 U. S. 359, 361, 367, 370, 36 L. Ed. 186, 187, 189, 190, 12 S. Ct. 396;

Missouri v. *Nebraska*, 196 U. S. 23, 34-36, 49 L. Ed. 372, 374-376, 25 S. Ct. 155.

In *Nebraska* v. *Iowa* (supra) it was stated that "avulsion would establish a fixed boundary, to-wit: the center of the abandoned channel"; or, as it was further expressed in the same opinion, "the boundary was not changed *and it remained as it was prior to the avulsion, the center line of the old channel.*"

In *Missouri* v. *Nebraska* (supra) this Court said that the boundary line "*must be taken to be the middle of the channel of the river as it was prior to the avulsion.*".

The above statements and quotations are cited and quoted with approval by this Court in the case of *Arkansas* v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638, which here, in its exceptions, the State of Louisiana contends that the Special Master, in his report, "disregards," though citing and quoting therefrom in his Conclusion of Law No. 5. So let us next consider what this Court held in *Arkansas* v. *Tennessee*, 246 U. S. 158 (supra). In that case, after making the pronouncement hereinabove by us quoted and itself quoting as above from *Nebraska* v. *Iowa*, 143

U. S. 359 (supra) and *Missouri* v. *Nebraska*, 196 U. S. 23 (supra), this Court proceeded to say:

> ". . . if the stream leaves its former bed and establishes a new one as the result of an avulsion, the boundary remains in the middle of the former channel. An avulsion has this effect, whether it results in the drying up of the old channel or not."

What effect is it that this Court has said an avulsion has? It has said that an avulsion has the effect of leaving "the boundary . . . in the middle of the former channel."

This Court having previously stated "it is settled beyond the possibility of dispute that where running streams are the boundaries between states, the same rule applies as between private proprietors; namely that when the bed and channel are changed by the natural and gradual processes known as erosion and accretion, the boundary follows the varying courses of the stream;" proceeded next to say:

> "So long as that channel remains a running stream, the boundary marked by it is still subject to be changed by erosion and accretion; but when the water becomes stagnant, the effect of these processes is at an end; the boundary then becomes fixed in the middle of the channel as we have defined it, *and the gradual filling up of the bed that ensues is not to be treated as an accretion to the shores, but as an ultimate effect of the avulsion.* The emergence of the land, however, may or may not follow, *and it ought not in reason to have any controlling effect upon the location of the boundary line in the old channel.*" (Emphasis supplied.)

Arkansas v. *Tennessee*, 246 U. S. 158, 173, 175, 38 S. Ct. 301, 62 L. Ed. 638, 647, 648.

Nothing could be clearer than the rule thus announced, but, if there be doubt, same is certainly clarified by that next stated by the Court in the same opinion:

"How the land that emerges on either side of an interstate boundary stream shall be disposed of as between public and private ownership is a matter to be determined according to the law of each state, under the familiar doctrine that it is for the states to establish for themselves such rules of property as they deem expedient with respect to the navigable waters within their borders and the riparian lands adjacent to them. (Cases cited.) Thus, Arkansas may limit riparian ownership by the ordinary high-water mark (cases cited); and Tennessee, while extending riparian ownership upon navigable streams to ordinary low-water mark, and reserving as public the lands constituting the bed below that mark (cases cited), may, in the case of an avulsion followed by a drying up of the old channel of the river, recognize the right of former riparian owners to be restored to that which they have lost through gradual erosions in times preceding the avulsion, as she has done in State v. Muncie Pulp Co. 119 Tenn. 47, 104 S. W. 437. *But these dispositions are in each case limited by the interstate boundary, and cannot be permitted to press back the boundary line from where otherwise it should be located.*

". . .

"Upon the whole case we conclude that the questions submitted for our determination are to be answered as follows:

"(1) The true boundary line between the states, aside from the question of the avulsion of 1876, is the middle of the main channel of navigation as it existed at the Treaty of Peace concluded between the United

States and Great Britain in 1783 (8 Stat. at L. 80), subject to such changes as have occurred since that time through natural and gradual processes.

"(2) By the avulsion of 1876 the boundary line between the states was unaffected, and remained in the middle of the former main channel of navigation, as above defined.

"(3) The boundary line should now be located according to the middle of that channel *as it was at the time the current ceased to flow therein as a result of the avulsion of 1876.*

"(4) A commission consisting of three competent persons, to be named by the court upon the suggestion of counsel, will be appointed to run, locate, and designate the boundary line between the states at the place in question in accordance with the above principles."

(Emphasis supplied.)

Arkansas v. *Tennessee*, 246 U. S. 158, 38 S. Ct. 301, 62 L. Ed. 638, 648-649.

The report of the Special Master in the case at bar and the recommended decree locating the boundaries between the States of Mississippi and Louisiana in the abandoned channels that are the subject of this litigation exactly accords with the foregoing decision.

It is interesting to note that the three commissioners appointed by the Court in *Arkansas* v. *Tennessee* (supra) to ascertain, locate, fix and establish the main channel of the Mississippi River as it had existed immediately prior to the avulsion of 1876 and to take such other evidence as was necessary to fix the line between the States of Arkansas and Tennessee relied to a very considerable extent, as did the Special Master in the case at bar, upon the reconnaissance, reports and chart of Major Charles R. Suter, Corps of

Engineers, United States Army, in the year 1874, and that thereafter the State of Tennessee excepted to the report of the commissioners, insisting that the middle of the main navigable channel as it existed before the avulsion could not be located with reasonable certainty and that the commissioners should have so reported. This Court overruled the exceptions of the State of Tennessee as being "without merit" and confirmed the report of the commissioners locating the boundary, with such certainty as they were then able to do that was reasonable as a practical matter, having regard to the circumstances, in and along the line of the navigable channel of the river as it had existed when the current ceased to flow therethrough as a result of the avulsion.

Because of the pertinency of that said by this Court in overruling the exceptions of the State of Tennessee, we now quote from the opinion, viz:

> "*Defendant insists that the middle of the main navigable channel as it existed before the avulsion could not be located with reasonable certainty and that the commissioners should have so reported.* It maintains that the recommended boundary, . . . *is based entirely on a reconnoissance made by Major Charles R. Suter, Corps of Engineers, United States Army, in 1874*, and insists that the Suter line is not established by the evidence. . . . .
>
> ". . . *The reconnoissance of 1874 was made pursuant to an Act of Congress approved June 23, 1874; chap. 457, 18 Stat. at L. 237, 242, providing for surveys and estimates for the improvement of certain transportation routes to the seaboard.* Major Suter was assigned to make examination of the Mississippi River from Cairo to the Gulf. His party had a government steamboat and, in the performance of the work, passed over,

the part of the river here involved four times. The courses of the channel were taken by compass. Distances were determined by the speed of the boat. Widths of the river were estimated, and to some extent these estimates were checked by triangulation. *The purpose was to ascertain the appearance of the river and to get a general idea of the shape and location of the channel.* No survey by actual measurements was made, and accuracy was not attained. From the evidence and a stipulation of the parties, the commissioners found that there had been no material change in the river between the time of the reconnoissance in 1874 and the avulsion in 1876. *While not made according to actual measurements, the Suter map may be said to present the general situation as it existed immediately before the* avulsion. . . .

"Counsel for the defendant asserts that, 'a map, to be of any value for the purpose of locating any particular lines or objects thereon, must be based upon a survey accurately made by measurement and instrumental observations, and must be a faithful and correct delineation of a faithful survey, in every detail.' And on that basis, he argues that the Suter map is valueless as a means accurately to fix the old channel, because not properly tied to some point or monument. But the standard demanded is not applicable. *The thing to be done must be regarded. It is to locate the boundary along that portion of the bed of the river that was left dry as a result of the avulsion, according to the middle of the main navigable channel at the time the current ceased to flow therein as a result of the avulsion.* Absolute accuracy is not attainable. *A degree of certainty that is reasonable as a practical matter, having regard to the circumstances, is all that is required.* The

line of the greatest depth of water is not necessarily the middle of the channel. (Cases cited.) The location, limits and width of the main navigable channel were not precisely defined or permanent. The determination of its location involved more than mere measurements and required the exercise of judgment based on experience. The degree of accuracy insisted on is not reasonable or practicable.

"Defendant's principal reliance is on opinions expressed by some of the witnesses to the effect that the line cannot be located with reasonable certainty. But such opinions are of little weight as against the facts shown and the determination of the commission. *In addition to the commissioners' careful investigation in the field, there was the testimony of steamboat men and others who were familiar with the situation* as it existed before the avulsion in 1876. It is sufficient to say that *when taken in connection with the Suter map and considered in the light of established physical facts and other evidence*, the testimony of these witnesses clearly establishes the line reported by the Commissioners. The exceptions are without merit and are overruled. The report of the commissioners is confirmed." (Emphasis supplied.)

Arkansas v. *Tennessee*, 269 U.S. 152, 154-157, 46 S. Ct. 31, 70 L. Ed. 206, 207, 208.

So we see that this Court in the case of *Arkansas* v. *Tennessee* (supra), adhered to its previously adopted rule, as expressed in earlier decisions, that "if the stream from any cause, natural or artificial, suddenly leaves its old bed and forms a new one, by the process known as an avulsion, the resulting change of channel works no change of boundary, which remains in the middle of the old channel, . . . and irrespective of subsequent changes in the new channel."

It is submitted that the contentions of Louisiana have been settled in previous litigation between Louisiana and Mississippi.

In *Louisiana* v. *Mississippi* (1931), 282 U.S. 458, 51 S. Ct. 197, the facts are parallel to the case at issue. There the point bar built eastwardly from the Louisiana shore five or six miles, and in 1912-13 the River cut across the neck or base of this point bar creating an island. In due time the old channel around the long bend filled. The Master found:

> "That the present true boundary line is the middle of the navigable channel prior to the avulsion of 1912-13, *as that channel was when the current ceased to flow therein by reason of the formation of the new channel by the avulsion of 1912-13 and the filling of the former channel.*"
>
> Id., p. 199.

This language seems clear enough. We find the Supreme Court approved the Master's report and by decree adjudged:

> "This cause coming on for hearing by this Court upon the report of Thomas G Haight, Special Master appointed by this Court, and . . . this Court having rendered an opinion sustaining all the findings and recommendations of the Special Master, and directing that a Decree should be entered as recommended by the Special Master, and the Court being fully advised in the premises:
>
> "It is therefore, considered, and now ordered, adjudged, and decreed by this Court as follows, to-wit:
>
> . . ."
>
> "That immediately prior to the avulsion of 1912-13 the boundary line between the State of Louisiana and

the State of Mississippi between latitude 32° 39′ on the North and the division line between Issaquena and Warren Counties, Miss. (as extended Westward), on the South was at the place and line which was the thread of the main channel of the Mississippi River as it then ran; *and that the current having since ceased to flow in part of said channel as it existed prior to said avulsion, because of the new channel produced thereby, at this time the true boundary line* between the State of Louisiana and the State of Mississippi, in that part and so much of the above area as was affected by the avulsion (between said North and South points), *is the middle of the navigable channel of the Mississippi River as said channel was located at the time when the current ceased to flow therein because of the new channel produced by the avulsion of 1912-13.* . . .

Id., p. 370.

The primary ground for Louisiana's exceptions to the Master's report in the case at bar is based on a clause in one sentence taken out of the sentence and out of the context of the whole opinion of this Court in *Arkansas* v. *Tennessee*, 246 U. S. 158. In one sentence in that case this Court said:

> "So long as that channel remains a running stream, the boundary marked by it is still subject to be changed by erosion and accretion; but when the water becomes stagnant, the effect of these processes is at an end; the boundary becomes fixed in the middle of the channel as we have defined it, and the gradual filling up of the bed that ensues is not to be treated as an accretion to the shores, but as an ultimate effect of the avulsion."

Louisiana lifts the first clause of this sentence out of the whole and stands it by itself as a criterion for determining a state boundary after the occurrence of an avulsion.

This Court says nothing different in *Arkansas* v. *Tennessee* (supra) from what it has said in other cases. The statement so oft quoted out of context in Louisiana's brief is to be considered according to its bearing on the facts in that case.

Louisiana says the Master "cited but disregarded" this case of *Arkansas* v. *Tennessee*. If an avulsion effected no change in boundary; if the boundary remained where it was prior to the cut-off; then the boundary was in the *thalweg* of the old channel.

The middle of the channel as this Court has defined it is "the sailing lane," "the channel of commerce," "the course of navigation," "the space within which boats can and usually do pass," "nature's pathway," "the navigable part of the river," the "highway for vessels," "the track taken by boats in their course down the stream which is that of the strongest current," the "track of navigation." These several descriptive phrases each express the same thought.

When the line of the thalweg in the old channel closed and failed to qualify within the definitions stated above, it ceased to be a *thalweg* and the line thereof became fixed, because if the old channel could not qualify under the above description at low water, it was not a running stream.

Further, if the old channel could not support commerce of the river at low stage, then clearly it was not a part of the permanent river.

The language of Mr. Chief Justice Marshall is apt:

> "Whenever the river is a boundary between states, it is the main, the permanent river which constitutes

that boundary; and the mind will find itself embarrassed with unsurmountable difficulty in attempting to draw any other line than the low water mark."

Handley's Lessee v. *Anthony, et al.*, 5 Wheat. U.S. 374; 5 L. Ed. 113.

In Louisiana's brief on the boundary in Oak Bend it is stated: "The legal question involved here is identical with the one involved in fixing the boundary around Diamond Island." (La. Brief, p. 26.)

Further Louisiana states: "This Oak Bend channel was in 1939, and *yet remains a running stream*, which is changed each year by erosion and accretion." (La. Brief, p. 28.) Because at a stage of seventeen feet or above on the Vicksburg gauge water flows through the old Oak Bend area. (Emphasis supplied.)

The area of Oak Bend asserted by Louisiana to yet remain a running stream is described by the Master after an on-the-site visit:

"In 1939 and again in 1940 no water flowed through the Oak Bend channel at low water and the entire low water flow was through the cutoff.

"At times of high water there was a flow of water in Oak Bend and may be at this time. When I visited the Oak Bend region in July, 1954, the bank was some 20 feet above the water in the river. There was a large expanse of sand in the old channel containing some vegetation. There was no water, except in certain low places where there was some stagnant water.

"At that time the river going through the cutoff was deep, the current swift, and large boats carrying commerce were moving on the river.

". . . current ceased to flow in the Oak Bend channel by at least 1940. Navigation could not use the

channel at that time, the water was stagnant in the old channel except in times of high water. It was no longer a part of the main river which continued to flow at all stages with a swift current through the cutoff carrying the commerce of the river."
(Master's Report, pp. 49, 50.)

It seems clear that in this case the Master has well read, understood and followed the reasoning of this Court in *Arkansas* v. *Tennessee*, 246 U. S. 158, where this Court said:

"Upon the whole case we conclude . . .:

"(1) . . .

"(2) By the avulsion of 1876 the boundary line between the states was unaffected, and *remained in the middle of the former main channel of navigation, as above defined.*

"(3) The boundary line should now be located according to the middle of that channel *as it was at the time the current ceased to flow therein as a result of the avulsion of 1876.*"

(Emphasis supplied.)

What the Master saw upon his visit to the Oak Bend area and has reported is demonstrative of that which occurred when Diamond Island Towhead was separated from Diamond Point Bar by the avulsion (circa 1864-1866), and the boundaries should now be located according to the middle of the abandoned channels as they were at the times the current ceased to flow therein.

Most surely the Master's finding accords with *Iowa* v. *Illinois*, again approved by this Court in *Arkansas* v. *Tennessee*, that the boundary is fixed in "the main, the

permanent river . . . and not that part which flows in seasons of high water, and is dry at other times."

The Doctrine of Accretions Has No Application to the Incidence of an Avulsion

In the case of *Tennessee* v. *Muncie Pulp Co.*, 119 Tenn. 47, which involved the same old abandoned channels as were involved in the case of *Arkansas* v. *Tennessee*, 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 638 and 269 U.S. 152, 46 S. Ct. 31, 70 L. Ed. 206, it was stated:

> "The doctrine of accretions has no application to the filling up of the old channel, abandoned by the river for a new one, as the result of an avulsion. The rights of the parties, in every respect, remain as they existed prior to the change. The proof conclusively shows that this change was sudden, violent and complete; that it resulted in drawing off much of the waters of the old channel, and leaving those remaining still and stagnant, a mere lagoon; that it was no longer used by boats navigating the river, except occasionally by small craft when the waters were up; that the channel immediately began to fill with sand and other alluvial deposits; and snags, bars, and banks appeared in a short time above the surface, and willows and cottonwoods began to grow upon them . . ."
>
> Id., pp. 122-123.

In *Missouri* v. *Nebraska*, 196 U.S. 23, 157, 25 S. Ct. 155, 49 L. Ed. 372, this Court said:

> "Accretions, no matter to which side it adds ground, leaves the boundary still the center of the channel. Avulsion has no effect on the boundary, but leaves it in the center of the old channel."

At the time of the occurrence of the avulsion which separated Diamond Island Towhead from Diamond Island Point the respective states of Mississippi and Louisiana had title to and sovereignty over the islands (including the submerged areas) on either side of the thalweg in the former main navigable channel of the Mississippi River around Diamond Island Towhead. Louisiana had title to and right of sovereignty over the land (including that submerged) on the right side of the line of the thalweg. Mississippi had title to and right of sovereignty over the land (including that submerged) on the left side of the thalweg; and this title and sovereignty of Mississippi included and extended over the entire area occupied by the newly adopted avulsive channel, to the full breadth, length and extent thereof.

United States v. *Oregon*, 295 U.S. 1, 55 S. Ct. 610, 79 L. Ed. 1267;

United States v. *Utah*, 283 U.S. 64, 51 S. Ct. 438, 75 L. Ed. 844;

Oklahoma v. *Texas*, 258 U.S. 574, 42 S. Ct. 406, 66 L. Ed. 771;

Kansas v. *Colorado*, 206 U.S. 46, 27 S. Ct. 655, 51 L. Ed. 956;

Trustees of Hopkins Academy v. *Dickinson*, 9 Cush. (Mass.) 544;

Handley's Lessee v. *Anthony, et al.*, 5 Wheat. 374, 5 L. Ed. 113.

As has been pointed out by the Special Master in his report (pp. 11, 12), this Court in the case of *State of Iowa* v. *State of Illinois*, 147 U.S. 1, 37 L. Ed. 55, held that the boundary between states is fixed by the rule of the thalweg and quoted with approval from the case of *Buttenuth* v. *St.*

Louis Bridge Co., 123 Ill. 535, 17 N.W. 439, where it is said:

> "The law as stated by law writers, and in the adjudged cases, seems to be that where a river is declared to be the boundary between states, although it may change imperceptibly from natural causes, the river 'as it runs continues to be the boundary'. But if the River should suddenly change its course, or desert the original channel, the rule of law is, the boundary remains in the middle of the deserted river bed. Where a river is the boundary between states, as is the Mississippi between Illinois and Missouri, it is the main, the permanent, river which constitutes the boundary, and not that part which flows in seasons of high water, and is dry at other times. Handly's Lessee v. Anthony, 5 Wheaton 374. In no other way would a river be a permanent fixed boundary, at all times readily ascertainable. There are many cogent reasons why the boundary lines between states should be permanent. Otherwise, territory in one state at one time, sooner or later, might be in another state. It must be in one state all the time, or else the state would lose jurisdiction over it."

It logically follows as a matter of necessity that after the occurrence of an avulsion, when the river has taken its new channel and the old channel has been filled as a result thereof to the extent that the current no longer flows therein and it is no longer a navigable stream, the boundary fixed by the occurrence of the avulsion cannot be said to be thereafter altered by subsequent depositions of sediment in high stages of the river and subsequent filling of the old channel nor by subsequent surface scouring resulting from the flow or overflow at high or flood stages.

"And the gradual filling up of the bed that ensues is not to be treated as an accretion to the shore but as an ultimate effect of the avulsion.

". . .

". . . These depositions are in each case limited by the interstate boundary and cannot be permitted to press back the boundary line from where otherwise it should be located."

Arkansas v. *Tennessee*, 246 U. S. 158 (supra).

Southern Boundary of Diamond Point

The Master stated the following conclusions of law to which no exceptions have been made:

"2. The tha weg is defined as meaning the middle of the main navigable channel, the track taken by boats in their course down the stream, which is that of the strongest current." (Report, p. 6.)

"7. Where an island is formed in a navigable stream which is the boundary between states, the island belongs to the state situated on the side of the thalweg on which the island is formed." (Report, p. 8.)

Conclusion of Law No. 7 has relation to the island formed in the navigable channel of the Mississippi River off the South side of Diamond Point in the Kellogg Lake area. The Special Master has found factually that this island was formed and first appeared on the Mississippi side or North side of the thalweg of the Mississippi River and thereafter by the deposition of alluvion and accretion has become attached thereto. Louisiana takes no exception to this special finding of fact. The facts relative thereto support the findings of the Special Master.

Keeping in mind that Louisiana offered evidence through its main witness, Mr. C. O. Durham, and its other principal

witness, Mr. Welder, (see testimony quoted in this brief from Transcript, Vol. III, pp. 1236 and 1367) that they had no real comprehension of the meaning of the term *thalweg* and that their whole development of their testimony upon the issues involved was based upon ignoring the term *thalweg* as having any relation whatsoever to navigation, the main witness for Louisiana states to the Special Master these facts as to the island formed on the southern side of Diamond Point:

"Mr. McKamy: *The main thalweg is south of that island in 1926, isn't it?*

"The Witness: *I would say that the deepest thalweg is south and within the next two years this becomes the only thalweg.*

"Mr. Clifton: I think your Honor is entitled to an answer to your question—was the main thalweg south. I would like to ask the witness if he can understand that question and answer it.

"A. The thalwegs are approximately equal but I would say the main flow and consequently the main thalweg at the time of this map is south of the sand bar.

"Mr. McKamy: And becoms the sole thalweg?

"The Witness: Eventually.

"Mr. McKamy: Have you got a 1933 map here that shows the situation?

"The Witness: Yes, sir, we have it. I can show you very plainly on the 1932 photographs. They may even be plainer at that time, to show you the abandonment.

"Mr. McKamy: By 1929, it shifted way down here?

"The Witness: Yes, sir, by 1929, shifted into this area.

"Mr. McKamy: Still further south—shows the thalweg to be cutting on this side, the right bank?

"The Witness: Yes, sir, cutting south of that island and by 1932, sir, as demonstrated on these photographs, which are 'Louisiana Exhibit No. 23,' the area of the sand bar that has been discussed I will marke in 'A'. By this time, during mean low water, there is no flow around the north.

"Mr. McKamy: In other words, became attached to the left bank?

"The Witness: Yes, sir, by its abandonment of that channel to the north, is now completely to the south. The retreat of the bank to the south has been previously alluded to as occurring between 1926 and 1929 and is still continuing, as can be seen by the caving bank along here, from the point between 'B' in blue to 'C' in blue, so that the channel that previously existed north of the sand bar has, by the time of the photographs, 'Louisiana Exhibit No. 23,'' been completely abandoned in high water.

"Mr. McKamy: The only maps that you have show that this island, the first time it appears on a map shows it north of the main thalweg?

"The Witness: Yes, sir, on the 1925-26 map."

(Transcript, Vol. III, pp. 1099-1100. Emphasis supplied.)

Dr. H. N. Fisk, a well qualified geologist (Master's Report, p. 20), testified before the Master as to this sandbar formation which formed north of the thalweg and on the Mississippi side of the river during cross-examination by Louisiana:

"Q. Have you made a study of the formation of that island, sir?

"A. Yes, sir, at some past I have made a study of this island. . . ."

And then explaining, Dr. Fisk said:

". . . One of the final stages in the deterioration of the channel, which subsequntly became abandoned, an island formed in the river and the thalweg in the river, in my opinion, at that time was on the south side of that island. . . . .

"Q. You mean, Doctor, that the island formed to the north of the thalweg in the river?

"A. Yes, sir, the main flow was to the south, as most islands are,"

(Transcript, Vol. I, pp. 329-331.)

Mississippi also offered Mr. Austin B. Smith, a man of twenty-five years experience in work on and studies of the Mississippi River (Master's Report p. 24). Mr. Smith locates the South Boundary of Diamond Point on a map of the Mississippi River Commission (Smith Exhibit 5, Transcript 679) as in the thalweg of the river which lies south of this island area claimed by Louisiana.

All of the witnesses in the hearing of this cause testified in person before the Master. At most, the exception of Louisiana on the point under consideration questions the Master's finding on what Louisiana says are disputed questions. The record does not support this contention.

However, the burden of sustaining the exceptions is on Louisiana as the objecting party; and the Master has had the opportunity of hearing and examining the witnesses face-to-face; and there is certainly a fair, a substantial amount of evidence to support the Master's findings; and the Master's findings are not shown to be erroneous by any persuasive weight of the evidence—so the Master's finding should not be disturbed.

On all the testimony heard and seen by the Master he found:

"Mr. Durham's testimony shows that from the only available maps and hydrographic surveys the island is shown to be north of the main thalweg of the river.

"Dr. H. N. Fisk testified that he made a detailed study of this area and that in his opinion the island was formed north of the thalweg of the river.

"This being the only evidence concerning the formation and location of the island and all of the maps and charts showing the island to lie north of the thalweg of the river and on the Mississippi side of the river, I find that the island is located within the territory of Mississippi and that the boundary between the states should be drawn south of the island at the location of the thalweg when the current ceased to flow in this channel and the water became stagnant as a result of the abandonment of the channel by the river.

(Master's Report, pp. 48-49.)

Fallacy of Arguments Made By Louisiana

The fallacy of the contentions made by Louisiana during the hearing before the Special Master and now is attributable to the following:

(a) The admitted ignorance on the part of the witnesses for the State of Louisiana of the rule of the thalweg and the law applicable in instances of an avulsion.

(b) The obvious attempt on the part of the State of Louisiana to evade the effect of the rule of the thalweg and the settled law applicable in boundary questions in instances of an avulsion.

(c) A misinterpretation by counsel for the State of Louisiana of the language of this Court in the numerous decisions that have been rendered in litigation of this character.

(d) The attempt on the part of the State of Louisiana

to develop some "new theory of closing channels" evolved by a graduate student of the University of Louisiana while engaged in preparation of his thesis for his Doctor's degree.

(e) The total lack of knowledge and experience with the action of the Mississippi River in the vicinity of the Diamond Island area.

(f) A misconception of the doctrine of accretion and the extent to which the same may be applied as pertains to boundaries and of the rule of law that such is not applicable in instances of avulsion with reference to the closing of old abandoned channels.

(g) The erroneous concept that the boundary between two sovereign states, whose boundaries are a navigable stream, may be altered or affected by deposition and filling in and of a former abandoned boundary channel or by surface scouring in times of high water after an avulsion.

(h) An apparent unwillingness to accept the fact that no evidence whatsoever was offered by the State of Louisiana based on the rule of thalweg announced by this Court that was pertinent to solution of the problem involved in this litigation under the well established rules of law here applicable.

(i) An unwillingness to accept the facts in the case as established by (1) credible and competent lay witnesses, (2) the testimony of credible and competent experts in the fields of geology and engineering, as offered by the State of Mississippi, (3) as demonstrated by the numerous maps and charts offered in evidence by the State of Mississippi, and (4) as found to be by the Special Master himself in conducting a personal examination and investigation of the critical areas in dispute.

(j) The assertion of a new theory which has no legal nor factual basis, and which is predicated upon a misconception of the Master's findings and conclusions.

(k) The erroneous assertion that the Master adopts a different legal test from that which he set out in Conclusion No. 5 of his report.

That the meaning of the term "thalweg," and "the rule of thalweg" were unknown to or not applied by the three, and only three, witnesses for the State of Louisiana is best demonstrated by quotations from their testimony in the record.

We have already quoted portions of the pertinent testimony of Louisiana's witnesses Durham and Wolfer (Tr., Vol. III, pp. 1236, 1366, 1369) (This brief pp. 13-15, 32-33), which conclusively illustrates this.

The only other witness offered by the State of Louisiana was Mr. H. M. Hayne, an engineer employed by the Department of Public Works of the State of Louisiana, who testified that he had made no study of the particular problem involved in this litigation but had merely prepared certain charts and drawings (La. Exhibit No. 43, Tr., Vol. III, p. 1398) overlaying bank lines from River Commission charts and maps, following directions of counsel for the State of Louisiana for the preparation of Louisiana's Exhibit No. 43. That the Louisiana Exhibit No. 43 is utterly valueless as an aid to the Court in resolving the questions involved in this litigation is demonstrated by the cross-examination of the witness H. M. Hayne (Tr., Vol. III, p. 1399, *et seq.*) whereby it was shown that the same was prepared with utter disregard of the rule of thalweg, the applicable law in instances of avulsion, and lack of familiarity with the law of accretion. It is obvious that these charts were prepared in line with the theory of the State of Louisiana throughout this case that the question of

boundary between the states is to be resolved upon some theory of bank line placement, high water overflow scouring effects, and tailing out of bar formations or low water bank line features.

Mr. H. M. Hayne on cross-examination stated:

"*By Mr. Brandon:*

". . .

"Q. You did not attempt to reconstruct or depict on any of the charts or exhibits prepared by you, the channel of the Mississippi River as it existed prior to the chute cutoff that separated Diamond Island Towhead from Diamond Point?

"A. No, sir."

(Tr., Vol. III, p. 1399)

". . .

"Q. The point I want to make is that you did not on any of your charts, show either the thalweg of the Mississippi River as of any particular date, or deep water navigable channel of the Mississippi River as of any of those dates.

"A. No, sir."

(Tr., Vol. III, p. 1402)

". . .

"Q. Turn now to your Plate No. 2.

"A. Yes, sir.

"Q. The green line that lies to the east of the red or orange cross-hatched area is nothing more than that line which was surveyed and mapped by engineers for the Department of Public Works of the State of Louisiana, following a course which had been marked out for such survey by Mr. Welder, is that right, sir?

"A. That's right.

"Q. Who is one of the geologists testifying for Louisiana?

"A. That's right.

"Q. And that represents, as you say, a chute or swale or channel through which water of the Mississippi River can now flow at high water stages only?

"A. That's been testified to."

(Tr., Vol. III, p. 1403)

". . .

"Q. Your Plate No. 2 has been prepared on the theory that the rights of the parties to this litigation are governed by low water bank lines, is that correct?

". . .

"A. I was asked to divide the accretions there and from a point as picked out by the geologist by lines perpendicular to the following bank lines.

"Q. Low water bank lines?

"A. Low water bank lines: *I did not go to the thalweg.*"

(Tr., Vol. III, pp. 1405-6. Emphasis supplied.)

". . .

"Q. You have not attempted to find any point where the thalweg or navigable channel of the Mississippi River, as it existed at the time of the occurrence of the chute cutoff, was separated from that channel that was adopted in the chute itself as a result of the cutoff, have you? In other words, you made no effort to find what we have referred to in this case as points of divergence of those flows of the river?

"A. No, sir, it didn't show on the maps. I have just traced my drawings directly from the maps.

"Q. You then have prepared this in accordance with certain requests and directions communicated to you

by the attorneys for the State of Louisiana, is
right?

"A. Yes, sir.

"Q. And without reference to navigable chann
the river in any instance?

"A. No.

"Q. You made no reference to those?

"A. No reference to navigable channels."

(Tr., Vol. III, pp. 1405-6.)

We submit that these admissions effectively dispos
the witnesses for the State of Louisiana and justify
Master's statement in his report (pp. 32-34).

The whole theory of the case for the State of Louis
as developed by the three witnesses for that state is p
cated upon an attempt to fix the boundary between
states along some "tight meander belt" following the
of drains and scoured-out surface features caused by
flow of water at high stages of the river and by the dep
tion of sediment from the slack overflow water at such
stages; upon the theory that the doctrine of accretio
applicable to the process of filling an abandoned river c
nel after the completion of an avulsion when the main
rent of the river is coursing down and through the n
made avulsive channel; and upon the theory that by
occurs in the new channel after the completion of the a
sion the state boundary can be pressed back under the
trine of accretion, which theory is repudiated by this C
in *Arkansas v. Tennessee*, 246 U.S. 158 (*supra*), sta
that, "These dispositions are in each case limited by
interstate boundary and cannot be permitted to press
the boundary line from where otherwise it should be
cated." This last contention is the Louisiana theory o
"tailing bars." If this theory were followed, it would

sult in there being two boundaries in this location resulting from the avulsion, a situation abhorrent in law.

The fact that the State of Louisiana is confused as to the applicable law in presentation of its exceptions to the report of the Master is demonstrated by certain questions propounded in the brief for Louisiana:

> "In what *varying* location of the old channel is the boundary to be fixed in such old channel around Diamond Island, inasmuch as it is not disputed that the island was formed as a result of an avulsive cutoff?"
>
> (Emphasis supplied.)
>
> (La. Brief, p. 2.)
>
> "To which state do accretions belong when they tailed down in front of Diamond Island . . .?"
>
> (La. Brief, p. 3.)

And this rather remarkable question:

> "But suppose that the boundary in the old channel did become fixed when there was no low water flow therein, wouldn't the old channel become a running stream when the waters rose and returned to their former bed, and wouldn't the boundary marked by such running stream 'still be subject to be changed by erosion and accretion'?"
>
> (La. Brief, p. 17.)

And finally this question:

> "*What has navigation to do with a boundary becoming fixed in a channel?*" (Emphasis supplied.)

Thus Louisiana demonstrates her case as presented wholly without regard to the rule of the thalweg and the

law of the avulsion announced and settled by so many decisions of this Court.

The Exceptions of Louisiana Have No Basis Either In Law Or In Fact

Louisiana does not assert that the facts as specially found by the Special Master (Master's Report, pp. 13-42 and 46-50) and stated in the summary of the report (Master's Report, pp. 42-45 and 51) are not abundantly supported by the credible evidence in the case. Louisiana simply seeks to substitute language and statements of its own choosing as being the facts in this case which are unsupported by the evidence and contrary to the applicable law. (Rules of this Court, *supra.*)

By its exceptions to the Master's report, in effect, Louisiana seeks to review the entire record in this cause, except (1) the facts admitted by Louisiana (Tr., Vol. 1, 5-6, 8) (Master's Report, pp. 15 and 46); and (2) the Master's finding of fact that the evidence is insufficient to show that either Louisiana or Mississippi had acquired title to the Diamond Island Towhead area by prescription and acquiescence of the other state.

We cannot agree with the statement contained in the brief for Louisiana to the effect, "That it will only be necessary for this Court to consider a very small portion thereof" (sic, the Record), or that this Court could find justification in rejecting the carefully considered findings of fact specially made by the Master without reviewing the testimony of the witnesses and considering the exhibits offered in connection with their testimony.

We most emphatically deny the statement of Louisiana (La. Brief, p. 6): "The almost conclusive facts, in connection with the legal questions, are shown on one particular survey of the Mississippi River Commission," i.e., Exhibit

Louisiana Cross-Examination Fisk No. 4 (Tr., Vol. I, 328-9), a copy of which, with certain matters superimposed thereon, Louisiana has inserted in its brief as Plate No. 1A.

The exhibit Louisiana Cross-Examination Fisk No. 4, as introduced in evidence, indeed has no pertinency whatsoever to the solution of the problem of fixing the boundary between Mississippi and Louisiana in the abandoned channel around Diamond Island Towhead as a result of the avulsion (*circa* 1864-1866).

It is admitted that the Diamond Island Towhead chute cutoff avulsion occurred at some time between the years 1863 and 1866. By the time Major Suter made his report dated February 18, 1875, eight or ten years after the occurrence of the chute cutoff, from his reconnaissance made in this particular area in 1874, the former thalweg channel of the river around Diamond Island Towhead had "filled up and the channel established itself permanently in the chute." (Mississippi Exhibit Smith "A," Tr., Vol. II, p. 660.) Prior to March 16, 1877, navigation had been established through the chute cutoff channel (Tr., Vol. II, p. 661).

By the time of the making of the survey of the Mississippi River by the Mississippi River Commission in 1878-80 (Mississippi River Commission Charts Nos. 49 and 50 (Complainant's Exhibit No. 10, Tr., Vol. I, p. 110, Complainant's Exhibit Smith No. 2, Tr., Vol. II, p. 665)), the old abandoned channel of the Mississippi River had filled to such an extent that no water could overflow into or enter same except after the surface of the river had risen to a stage of from fifteen to twenty feet above the stage of mean low water (Tr., Vol. II, pp. 716-718).

The Mississippi River Commission chart introduced as Exhibit Louisiana Cross-Examination Fisk No. 4 (Tr., Vol. I, pp. 328-9) was compiled from sundry manuscript charts made at varying river stages and in this particular area at

some intermediate high stage of the river, i.e., at a stage of about seventy feet, Memphis datum (Tr., Vol. II, p. 814), and being at a high stage of approximately twenty feet above mean low water (Tr., Vol. II, p. 822). The so-called "channel" depicted on the chart upon which Louisiana seeks to overcome the report of the Master in the case at bar would have had no greater depth than approximately five feet at the high stage of water depicted by the chart, and hence that so-called "channel" would have been completely dry at a river stage of fifteen feet above mean low water.

The so-called "channel" depicted upon the map here relied upon by Louisiana was only one of several flood water depressions, sloughs, drains or scoured out high water surface features and was in no way related to the location of the abandoned thalweg. That depicted by the manuscript chart (Exhibit Louisiana Cross-Examination Fisk No. 4, Tr., Vol. I, pp. 328-9) as reproduced in Louisiana's brief, pages 8-9, and the enlargement (Louisiana Brief, pp. 6-7) is illustrative of a high water surface scouring feature in the abandoned former river bed around Diamond Island Towhead as shown by Complainant's witnesses Fisk and Smith. The features and situation shown on this manuscript chart, to which Louisiana seeks to give emphasis, must not be confused with those which form the basis for locating the boundary between the states after an avulsion. This is clearly demonstrated by the testimony of the witnesses for Mississippi regarding the said manuscript chart. See testimony of Dr. H. N. Fisk (Tr., Vol. I, pp. 319-329) and that of Mr. Austin B. Smith (Tr., Vol. II, pp. 808-822).

Contrary to the assertion of Louisiana at pages 6 and 7 of its brief, the manuscript chart (Exhibit Louisiana Cross-Examination Fisk No. 4, Tr., Vol. I, pp. 328-9) must not be confused with Complainant's Exhibits Nos. 10 and 11 (Tr.,

Vol. I, p. 110) or with Complainant's Exhibit Fisk No. 5 (Tr., Vol. I, p. 79), Fisk No. 6 (Tr., Vol. I, p. 143), Smith No. 2 (Tr., Vol. II, p. 665) and Fisk No. 15 (Tr., Vol. III, p. 1457); nor should same be confused with Louisiana Exhibits Cross-Examination Fisk No. 1 (Tr., Vol. II, p. 840) and No. 16 (Tr., Vol. III, p. 1002). They are not the same, as a comparison will conclusively show.

That the depression or swale which was surveyed by Louisiana's engineers (Louisiana Exhibit No. 36, Tr., Vol. III, p. 1325), and which by its Exceptions Nos. 3, 4, 5 and 9(B) Louisiana seeks to have this Court establish as a part of the boundary of the States of Mississippi and Louisiana, is nothing more than one of several high water scour features (observed by the Special Master in course of his inspection of the Diamond Island Towhead area) is clearly demonstrated by exhibits introduced in evidence and testimony of witnesses, including the following: "Geological Investigation of Diamond Island Towhead Area" Report by Dr. H. N. Fisk with Appendix, Plates 1-11 (Tr., Vol. I, p. 45); Testimony of Dr. H. N. Fisk (Tr., Vol. I, pp. 34, 44, 59, 73-77, 88-94, 148-163, 172-182); Report of Mr. Austin B. Smith dated July 14, 1954 to the Attorney General for the State of Mississippi (Tr., Vol. II, p. 747); Testimony of Mr. Smith (Tr., Vol. II, pp. 808-822, 845-851); Testimony of Mr. Clarence O. Durham, Jr. (Tr., Vol. III, pp. 983-984, 1004, 1171-1176, 1260-1262); Testimony of Mr. Welder (Tr., Vol. III, pp. 1305, 1308).

The Special Master accurately and correctly fixed the eastern terminus of the boundary between the states around Diamond Island Towhead at Point "S" as shown on Complainant's Exhibit Smith No. 5 (Tr., Vol. II, p. 679) upon which this Point "S" was placed by Mr. Smith at the request of the Special Master. This action of the Special Master is predicated upon the clear, certain, material, rele-

vant and undisputed proof in the case and is supported by all of the evidence in the case, including: (a) Map No. 20 made by Major Suter from Survey of Year 1874 (Tr., Vol. I, p. 110) and Report of Major Suter dated February 18, 1875, Complainant's Smith Exhibit "A" (Tr., Vol. II, p. 660); (b) "Geological Investigation of Diamond Island Towhead Area" by Dr. Harold N. Fisk, Ph. D. of date August 25, 1944, with Appendix, Plates 1-11 (Complainant's Exhibit Fisk No. 4, Tr., Vol. I, p. 45); (c) Testimony of Dr. H. N. Fisk (Tr., Vol. I, pp. 77-82, 164, 167, 482, 190, 279); (d) Report of Mr. Austin B. Smith dated July 14, 1954 to Attorney General for the State of Mississippi (Complainant's Exhibit Smith No. 9, Tr., Vol. II, p. 747); (e) Testimony of Mr. Austin B. Smith (Tr., Vol. II, pp. 856-868, 873); (f) Complainant's Exhibit Smith No. 10 (Tr., Vol. II, p. 874); (g) Testimony of Captain William H. Reed (Tr., Vol. I, pp. 483-484); (h) Testimony of Louisiana witnesses Durham and Welder relative to the existence of the gravel bar extending between the divided thalwegs (Durham Tr., Vol. II, 901, 948-959, Vol. III, 1142, et seq., 1139, 1256-1258; Welder Tr., Vol. III, 1323-1331, [illegible], 1382).

When the chute cutoff channel across Diamond Island Point had widened and deepened sufficiently to carry a major portion of the current of the river, the old channel around Diamond Island Towhead (from the point in the thalweg from which the current was diverted through the cutoff channel by reason of the avulsion) was rapidly plugged and filled. (See testimony of Dr. H. N. Fisk and Mr. Austin B. Smith above referred to.) The submerged bar formed at the upper end of Diamond Island Towhead between the divided currents was never eroded and *is yet in evidence* (Master's Report, p. 44). The process of closing, filling and plugging of the old thalweg channel around Diamond Island Towhead was much more rapid than that of

Oak Bend following the construction of the Diamond Point Cut-Off by U.S. Engineers in 1933 (the result and effect of which was personally seen by the Master). This fact is established by testimony of Dr. H. N. Fisk (Tr., Vol. I, pp. 94-100, 181-182) and of Mr. Austin B. Smith (Tr., Vol. II, pp. 673-675, Vol. III, pp. 1439-1449). Hence there could have been no "migration" of the point at the head or upper end of the old abandoned channel around Diamond Island Towhead which has been located as Point "S" in the report of the Master as of the time when the current of the river ceased to flow through the old channel and it became abandoned.

The Master's Findings of Fact Are Conclusively Shown to Be Correct

The Special Master has executed his commission in accordance with the order of reference, and with the utmost care. His stated conclusions of law accord with the prior decisions of this Court and have been correctly applied to the facts of this case. During the course of many days consumed in the hearing of this cause, the Master personally heard and observed the expert and lay witnesses testify; he observed their factual demonstrations in utilizing the maps, charts, diagrams and other exhibits to develop the facts; and he personally inspected the critical areas. He has made adequate references to testimony and exhibits to support his factual findings. (Master's Report, pp. 15-42 and 46-50.)

The Master has adequately and sufficiently documented his Special Findings of Fact (Master's Report, pp. 13-51). Here we submit more complete and detailed references to exhibits and testimony which conclusively support and confirm each of the summarized and numbered Findings of Fact set forth at pages 42-45 and 51 of the Master's Report.

To do this we restate the Summary of Findings of Fact as reported by the Master, appending thereto additional references to the exhibits and the testimony, to which the Court may refer, viz.:

Summary of Findings of Fact as to Diamond Island

"1. A point bar (Diamond Island Point Bar) was formed and built by erosion of the territory of Louisiana on the right bank of the Mississippi River and by accretion to the mainland of Warren County, Mississippi, in a northerly and westerly direction, over a long period of years. As the point bar thus moved, the thalweg or main navigable channel of the River, forming the boundary between Louisiana and Mississippi, also moved in a northerly and westerly direction until it reached a position about 1864 around to the north and west of what is now called Diamond Island."

Stipulation of the State of Louisiana (Tr. 5); Map Exhibits to Original Bill of Complaint Nos. 1-7(a) and 7(b) (Tr. 110); Map Exhibits to Original Bill of Complaint Nos. 30-32 (Tr. 110); Fisk Exhibit No. 4 (Tr. 45); Fisk Exhibit No. 11 (Tr. 306); Exhibits to Testimony of J. Proby Sessions, C. E., Nos. 1-4 (Tr. 370, 379, 387, 393); Exhibits to Testimony of Austin B. Smith, Smith Exhibit No. 6 (Tr. 695); Testimony of Dr. Harold N. Fisk (Tr. 15-38, 45, 57-60, 61-66).

"2. Sometime between the year 1864 and the year 1866 the River by an avulsion during a period of high water cut across the point bar and formed a chute cutoff, leaving the northwest end of the point bar an island, thereafter known as Diamond Island, but with the main channel of the River still flowing around the island to the north and west thereof."

Stipulation of the State of Louisiana (Tr. 5); Map

Exhibits to Original Bill of Complaint Nos. 7(a), 7(b) and 8 (Tr. 110); Fisk Exhibit No. 4 (Tr. 45); Fisk Exhibit No. 11 (Tr. 306); Exhibits to Testimony of J. Proby Sessions Nos. 1-4, inc., overlaid (Tr. 370-393); Smith Exhibit No. 10 (Tr. 695); Report of Austin B. Smith to Attorney General of Mississippi, Smith Exhibit No. 9 (Tr. 747); Testimony of Dr. H. N. Fisk (Tr. 44-73).

"3. After the chute cutoff was formed it developed and widened until the major portion of the flow of the River was diverted into it and the former main channel around the island ceased to be navigable and was filled by deposition of gravel, sands, clays, silt and other materials. The current ceased to flow in this channel and the water became stagnant except in periods of high water by at least the period 1878-80."

Map No. 20 made by Major Suter from Reconnaissance of 1874 (Tr. 110); Report of Major Charles R. Suter of date February 18, 1875, Smith Exhibit "A" (Tr. 660); Charts 49 and 50, Mississippi River Commission, Exhibit No. 1 to Bill of Complaint (Tr. 110); "Geological Investigation of Diamond Island Towhead Area" by Harold N. Fisk, Ph. D., dated August 25, 1944 with Appendix Plates Nos. 1-11 (Tr. 45); Testimony of Dr. H. N. Fisk (Tr. 12-100, 129-141, 162-170, 172, 181-182, 207-209, 297); Report of Austin B. Smith dated July 4, 1954 to Attorney General of Mississippi, Smith Exhibit No. 9 (Tr. 747); Photostatic copy Annual Report Chief of Engineers for Year 1878, Part II, Smith Exhibit "B" (Tr. 62); Chart No. 49 of Year 1878-80, Survey of Mississippi River Commission, Smith Exhibit No. 2 (Tr. 665); Graph-Approximate Position of Dead Thalweg *Circa* 1876, Smith Exhibit No. 7 (Tr. 729); Rough sketch, Smith Exhibit No. 10 (Tr. 874);

Testimony of Mr. Austin B. Smith (Tr 643-661, 669, 677-678, 689-720, 754-760, 792, 797-803, 822-831, 845-848, 1436-1456).

"4. The hydrographic survey of the Mississippi River of the date 1882 shows the channel around Diamond Island to be closed and to be filled to an elevation of 15 to 20 feet above mean low water. Charts 49 and 50, Complainant's Exhibit 10; Smith's testimony, Tr. pp. 707-717, and Fisk's testimony, Tr. p. 95."
Smith Exhibit No. 2 (Tr. 665); Smith Exhibit No. 10 (Tr. 874); Testimony of Dr. H. N. Fisk (Tr. 219-329); Testimony of Austin B. Smith (Tr. 808-822).

"5. The flow of the River was divided when the chute channel was formed and one branch of the thalweg continued in the channel around the island until that channel was filled and abandoned. The other branch of the channel was diverted into the chute cutoff and became the sole thalweg of the River when the old channel was abandoned. The division of the flow was caused by a submerged bar attached to the head of the island and extended upstream into the River to the point of the divided thalweg. This point of division is shown on Map 20 of Major Suter and is fixed as Point "S" on Exhibit 5 to Austin B. Smith's testimony."
Complainant's Map Exhibits to Bill of Complaint Nos. 7(a) and 7(b), Suter Map No. 20 from Reconnaissance of Major Suter of Year 1874, Mississippi River Commission Charts Nos. 49 and 50 of the year 1878-80 (Tr. 110); Report of Major Suter of date February 18, 1875, Smith Exhibit "A" (Tr. 660); Photostatic copy Annual Report Chief of Engineers for the year 1878, Part II, Smith Exhibit "B" (Tr. 662); Aerial Photographic Mosaic, Sessions No. 1 (Tr. 370) overlaid by Transparent Overlay Maps of Suter Map, Ses-

sions No. 3, and River Commission Survey of 1878-80, Sessions No. 4 (Tr. 370 and 393); "Geological Investigation of Diamond Island Towhead Area" by Harold N. Fisk, Ph. D., of date August 15, 1944, with Appendix Plates 1-11 (Tr. 45); Fisk Exhibits Nos. 5, 5(a) and 6 (Tr. 77, 82 and 143); Thalweg Positions Diamond Island Towhead (Plate 10-A), Fisk Exhibit No. 11 (Tr. 306); Testimony Dr. H. N. Fisk (Tr. 15-100, 148-158, 164-167, 181-190, 206-209, 224-226, 297, 333-345); Report of Mr. Austin B. Smith dated July 14, 1954 to Attorney General of Mississippi, Smith Exhibit No. 9. (Tr. 747); Testimony of Austin B. Smith (Tr. 651-661, 669-671, 678-680, 720-729, 747-749, 756-789, 822-831, 848-851, 858-870, 873-875); Testimony of Mr. Clarence O. Durham, Jr. (Tr. 1239, 1256); Testimony of Mr. Frank Welder (Tr. 1328-1332, 1382).

"6. When the old channel was abandoned the submerged bar came above water by deposition deposited upon it and formed a part of Diamond Island from the head of that island to the point of division of the current represented by Point "S" as marked on Exhibit 5 to the testimony of Austin B. Smith. This bar of gravel, sands and other material was attached to the part of the upper end of said Diamond Island Towhead between the original main channel of the Mississippi River and the main channel of the chute cutoff course and evidence of this point of diversion is yet in existence by the deposition of gravel shown on Temporary (contemporary) charts of the United States Engineers and of the Mississippi River Commission, observation of witnesses, photographs and borings, and is evident from an inspection of the premises; and since said gravel deposit is yet in existence, it is found that same was never eroded, washed away or destroyed. See

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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1955

Number 11, Original

STATE OF MISSISSIPPI,

Plaintiff

versus

STATE OF LOUISIANA,

Defendant

REPLY BRIEF OF THE STATE OF LOUISIANA

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Chart 49, Mississippi River Commission, 1882, Complainant's Map Exhibit 10; Report of Dr. H. N. Fisk and photographs therein contained, Complainant's Fisk Exhibit No. 4; Testimony of Dr. H. N. Fisk, Tr. 77-82, 164, 167, 182, 190, 297; Testimony of Captain William H. Reed, Tr. 483-485, 516-517; Testimony of Austin B. Smith, Tr. 865-868, 873, and Complainant's Smith Exhibit No. 10; the Suter Map No. 20, Complainant's Exhibit No. 8, and interpretation thereof, testimony of Mr. Smith, Tr. 876-877; Testimony of Mr. Clarence O. Durham, Jr., Tr. 948-959, 971, et seq. 1142, 1239, et seq.; Testimony of Mr. Frank Welder, Tr. 1323, 1328, 1349, et seq."

We submit that no additional documentation is needed.

"7. The boundary between the States of Louisiana and Mississippi in the old channel was not changed by the avulsion and was fixed from Point "S" around the Island to the north and west at the position of the thalweg in that channel when the current ceased to flow therein and the water became stagnant by at least the period 1878-80."

Chart 49, Mississippi River Commission, 1882, Complainant's Map Exhibit No. 10 (Tr. 110); Report of Dr. H. N. Fisk with appended Plates 1 to 10, Complainant's Fisk Exhibit No. 4 (Tr. 45); the Suter Map No. 20, Complainant's Exhibit No. 8 (Tr. 110) and interpretation thereof, Testimony of Mr. Austin B. Smith (Tr. 876-877); Report of Major Charles R. Suter of date February 18, 1875 (Tr. 660); Photostatic copy Annual Report Chief of Engineers for year 1878, Part II (Tr. 662); Testimony of Dr. H. N. Fisk (Tr. 41-94, 129-141, 164, 167, 181-189, 221-225); Report of

Austin B. Smith dated July 14, 1954 to Attorney General of Mississippi (Tr. 747) and Testimony of Mr. Smith in presentation of his report (Tr. 643-670); Testimony of Mr. Austin B. Smith (Tr. 689-726, 754-756, 771-797, 845-848, 865-870); Complainant's Smith Exhibit No. 2 (Tr. 665); Complainant's Smith Exhibit No. 5 (Tr. 679).

This summarized Finding of Fact No. 7 necessarily follows from the preceding six Findings of Fact under the applicable law as to the effect of an avulsion.

"8. As Diamond Island Point Bar, subsequent to the occurrence of the avulsion and chute cutoff, continued to build downstream and westwardly by the gradual process of erosion and accretions, the flow of the waters through the chute cutoff eroded, caved in and washed away portions of the southerly side of Diamond Island Towhead, particularly off of the southwest end of same. While erosion was occurring by impingement of the current against Diamond Island Towhead at the westerly end thereof at the same time erosion was taking away portions of the Louisiana mainland to the west and southwest of the westerly end of Diamond Island Towhead. The maximum extent of this erosion of the west end of the Island is at that point in the thalweg of the original old and abandoned channel of the Mississippi River around Diamond Island Towhead (situated between Diamond Island Towhead and the Louisiana mainland at the west end of Diamond Island Towhead) which has been denoted as Point C at the westerly end of Diamond Island Towhead on Complainant's Exhibit 5 to the testimony of Mr. Austin B. Smith."

Complainant's Map Exhibits 1-29, inc. (Tr. 110); Geo-

logical Investigation of Diamond Island Towhead Area by Harold N. Fisk, Ph. D., dated August 25, 1944, with appended Plate No. 4 (Tr. 45); Testimony of Dr. H. N. Fisk (Tr. 142-148, 291-301); Sessions' Exhibits: Photographic Mosaic Exhibit 1 overlayed by Transparencies Sessions' Exhibits 4, 5, 6 and 7 (Tr. 370, 393, 403, 415, 419); Report of Austin B. Smith dated July 14, 1954 to the Attorney General of Mississippi, Smith Exhibit No. 9 (Tr. 747); Testimony of Austin B. Smith (Tr. 671-672, 742).

"9. In accordance with the legal principle concerning division of accretions urged by both the State of Mississippi and the State of Louisiana, I find that the boundary between the two States in the Diamond Island-Diamond Island Towhead area on the east should be fixed by beginning at the Point S as located on Exhibit 5 to the testimony of Austin B. Smith and extending across the accretions at right angles to the successive thalwegs along the line from Point S to Point S_1, Point S_2, Point S_3, Point S_4 to Point S_5; all as shown on said Exhibit 5 to the testimony of Austin B. Smith, and on the west should be extended across the accretions beginning at the Point C and along the line to Point C_1, Point C_2 and Point C_3, as shown on said Exhibit 5 to the testimony of Austin B. Smith. The points, according to the testimony, can be easily located upon the ground and an accurate description prepared by Mr. Austin B. Smith, a competent engineer, is set forth below in this report."

Refer to documentation under previously stated Findings of Fact and additionally refer to: Complainant's Smith Exhibit No. 5 (Tr. 679) and further Testimony of Mr. Austin B. Smith (Tr. 677-746);

Complainant's Smith Exhibit No. 11 (Tr. 875); Complainant's Smith Exhibit No. 2 (Tr. 665).

Corroborative evidence that the Diamond Island Towhead area encompassed within the boundary as recommended by the Special Master was formed to Diamond Island Towhead and is a part of the State of Mississippi will be found in the following: Testimony of Captain William H. Reed (Tr. 468, et seq.); of witness L. C. Dunmore (Tr. 535, et seq.); of witness L. M. Spencer (Tr. 595, et seq.); Complainant's Exhibits "R-10" to "R-36", inc. (Tr. 426-437), with particular attention called to certified copy of sketch map made from Official Map of Warren County, Mississippi dated 1888, Complainant's Exhibit "R-13" (Tr. 430); Certified copy of records of Warren County, Mississippi delinquent tax sales and certified copy of forfeited tax land patent from State of Mississippi to Florence Mackey dated July 19, 1887, Complainant's Exhibits "R-10" and "R-11" (Tr. 428 and 429); Findings of Fact and Conclusions of Law and Final Decree of the Chancery Court of Adams County, Mississippi in Cause No. 7277 that Court, Complainant's Exhibits "R-33A" and "R-33B" (Tr. 436 and 437); affirmed by Supreme Court of Mississippi *Sharpe and Stricker* v. *Learned*, 32 So. (2d) 141.

See also admission by witnesses for Louisiana that accretions attached to Diamond Island Towhead and to the upstream projected bar at the head of Diamond Island Towhead between the "divided thalwegs", Testimony of Mr. Clarence O. Durham, Jr. (Tr. 901, 1239-1240, 1256-1258); Testimony of Mr. Welder, "Now I can't deny that sediment has been deposited all around Diamond Island. It's obvious that it has, but . . . well, that is my geological interpretation of it." (Tr. 1323).

Summary of Findings of Fact as to Diamond Point

"1. I find, based upon the admissions of the State of Louisiana and upon the evidence, that Diamond Point is located in the State of Mississippi, and that the correct boundary between the States of Mississippi and Louisiana in the Diamond Point area is as described in the next part of this report."

Admissions of the State of Louisiana (Tr. 5-6, 8-11); Complainant's Map Exhibits 10, 14-18, 20-35 (Tr. 110); Geological Investigation of Diamond Island Towhead Area by Harold N. Fisk, Ph. D., of date August 25, 1944 with Appendix Plates 1-11 (Tr. 45); Fisk Exhibit No. 8 (Tr. 147); Fisk Exhibit No. 10 (Tr. 303); Exhibits to Testimony of J. Proby Sessions, C. E., Aerial Photographic Mosaic Sessions No. 1 superimposed by transparent overlays of Sessions Nos. 2 to 9, inc. (Tr. 370-419, 465-467); Testimony of Dr. H. N. Fisk (Tr. 122-128, 142-148, 286-307, 308-319); Testimony of Mr. John L. Hyland (Tr. 442-456); Complainant's Exhibits Hyland No. 1 and No. 2 (Tr. 452-453); Testimony of Captain William H. Reed (Tr. 504-511); Report of Austin B. Smith of date July 14, 1954 to Attorney General of Mississippi, Smith Exhibit No. 9 (Tr. 747); Complainant's Smith Exhibits 1, 2, 3-A, 3-B, 4 and 5 (Tr. 664, 665, 666, 668, 679); Smith Exhibit No. 11 (Tr. 875); Smith Exhibits Nos. 12-14, inc. (Tr. 1422, 1434, 1440); Complainant's General Exhibits "AA" (1), (2) and (3) (Tr. 422); Complainant's General Exhibit "BB" (Tr. 422); Testimony of Austin B. Smith (Tr. 643-669, 875, 439); Testimony of Mr. Clarence O. Durham, Jr. (Tr. 1070-1102); Testimony of Mr. Frank Welder (Tr. 1383-1387).

"2. I find that under the doctrine of prescription the State of Mississippi has acquired title to the area known as Diamond Point and that its claim thereto has been acquiesced in by the State of Louisiana over a long period of time."

Testimony of Captain William H. Reed (Tr. 504-511); Testimony of Mr. J. C. Hunter (Tr. 633-639); Complainant's General Exhibits "R-1" to "R-9", inc. (Tr. 423-428; Complainant's General Exhibits "R-39" to "R-47", inc. (Tr. 631-639, and 880).

Conclusion

On the basis of the facts of this case as specially found by the Special Master and his conclusions of law thereon as submitted and reported to the Court, the Master has found and concluded that the state boundaries involved in this suit are as described in Part V of his Report, pages 51-56, inclusive.

This finding and conclusion of the Master is in accord with the evidence and with the law and the jurisprudence of this Court, correctly applied to the facts.

The boundaries have been found, located and described by the Master, accurately, with certainty and by geodetic positions (North American Datum), on Complainant's Exhibit Smith No. 5 and in Part V, pages 51-56, inclusive, of his Report.

The State of Mississippi respectfully urges that the Report of the Special Master be confirmed and that the decree recommended by the Master be entered fixing and establishing the true boundary between the States of Louisiana

and Mississippi at the places involved in this case to be as set forth under Part V of the Master's Report.

Respectfully submitted,

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Certificate

This is to certify that copies of the foregoing brief have been served upon counsel of record of the State of Louisiana by mail, deposited in a United States mail box, with first class postage prepaid, addressed to counsel of record of the State of Louisiana at the post office address listed.

This August —, 1955.

Special Assistant Attorney
General of the State of Mississippi.

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